

# VERDERFLEX<sup>®</sup>

Hose for Verderflex Industrial  
Hose Pumps



**VEDDER**  
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Solutions in Pumping Technology

# The Verderflex hose

## The hose is the heart and soul of a peristaltic pump

The successful use of hose pumps in a number of industrial fields led Verder to develop a hose with a special construction. Hoses in peristaltic pumps fail due to fatigue between the rubber layers and the reinforcement. However, Verder successfully developed a hose designed to postpone fatigue within its construction, resulting in extremely long hose service life.

Internal diameter of the hose and rotor speed determine the flow rate of the pump. Hose wall thickness compared to its diameter and the number of reinforcement layers are responsible for the restoration forces of the hose after compression and creates a virtual vacuum in the hose. The construction of the textile reinforcement allows a discharge pressure of the pump of 16 bar/230 PSI for all pump types.

## Surface properties of the hose

Some industrial hose pumps in today's market have machined exteriors, a process generally employed by others to achieve an equal wall thickness. In comparison, the unique Verderflex production process is so precise that the exact wall thickness tolerance is maintained at each and every point. For this reason Verderflex hoses do not have to undergo this additional process of external machining. Thus when Verderflex hoses are tested alongside their competitors, results indicate that there is no additional friction loss due to the wound surface, but that the Verderflex hose remains homogeneous and has no other surface area liable to contamination. All Verderflex hoses have a coloured lettering on the exterior which indicates the type of hose. The Verderflex lettering is white for a NR hose, in Yellow for a NBR and in red for a EPDM hose type, in yellow with a white stripe for the Food Grade, NBRF and green for Hypalon® or CSM.

Hypalon® is a registered trademark of DuPont Dow Elastomers



# Hose selection

## Verderflex NR

Most common hose for all market segments is the Natural Rubber (NR) hose. Both the core and cover are made from smooth NR and are highly resistant to abrasion. Suitable for use with lightly corrosive chemicals, highly abrasive slurries, inorganic products, etc.

## Verderflex NBR

This hose is particularly suitable for use with oily and fatty products, along with organic materials. The core is of nitrile rubber (NBR) and the cover is of a blend of SBR/NR in black and is spiral wound.

## Verderflex NBRF

The NBRF hose has an FDA approved food grade inner liner for use in EHEDG compliant and similar hygienic applications.

## Verderflex EPDM

This hose is suitable for highly corrosive chemicals and inorganic products, its core is made of a smooth EPDM rubber. A particularly noteworthy feature is the cover, which is also made of EPDM, in contrast to many other hoses whose cover is made of natural rubber. This feature makes the hose exceptionally resistant to chemicals, even those for diffusing media.

## Verderflex CSM

The CSM, or Hypalon® hose, is used to pump highly corrosive materials such as strong oxidising agents. This hose has a CSM inner core and an SBR/NR outer cover; it has a maximum continuous temperature rating of 85° C/185° F



## Technical hose data

	Natural rubber NR	Perbunan NBR	NBRF	EPDM	CSM
<b>Colour mode</b>	white	yellow	yellow/white	red	green
<b>Material</b>					
Innerlayer	NR (68° Shore A)	NBR (70° Shore A)	NBRF (69° Shore A)	EPDM (70° Shore A)	CSM (73° Shore A)
Cover	NR (55° Shore A)	NBR (55° Shore A)	SBR/NR (55° Shore A)	EPDM (70° Shore A)	NR (60° Shore A)
<b>Temperature</b>	-20° C / + 80° C -5° F / + 175° F	-20° C / + 80° C -5° F / + 175° F	-20° C / + 80° C -5° F / + 175° F	-20° C / + 100° C* -5 F / + 210 F*	-20° C / + 85° C -5° F / + 175° F
<b>Pressure</b>	16 bar / 230 psi	16 bar / 230 psi	16 bar / 230 psi	16 bar / 230 psi	16 bar / 230 psi

\*For short time up to 120° C / 250° F

Type	Diameter		Length [mm / inch]	Weight [kg / lb]
	internal [mm / inch]	external [mm / inch]		
<b>VF 5</b>	5 / 1/4	32 / 1.26	510 / 20	0.75 / 1.7
<b>VF 10</b>	10 / 3/8	32 / 1.26	510 / 20	0.75 / 1.7
<b>VF 15</b>	15 / 3/4	37 / 1.40	780 / 30.7	1.0 / 2.2
<b>VF 20</b>	15 / 3/4	37 / 1.40	780 / 30.7	1.0 / 2.2
<b>VF 25</b>	25 / 1	55 / 2.17	1005 / 39.6	2.0 / 4.4
<b>VF 32</b>	32 / 1 1/4	62 / 2.44	1250 / 49.2	3.1 / 6.8
<b>VF 40</b>	40 / 1 1/2	65 / 2.6	1490 / 58.7	4.0 / 8.8
<b>VF 50</b>	50 / 2	81 / 3.19	1820 / 71.7	6.5 / 14.3
<b>VF 65</b>	65 / 2 1/2	101 / 4.00	2335 / 91.9	12.5 / 27.6
<b>VF 80</b>	80 / 3	123 / 4.84	2780 / 109.4	22 / 48.5
<b>VF 100</b>	100 / 4	144 / 5.67	3270 / 128.7	35.5 / 78.3
<b>VF 125</b>	125 / 5	170 / 6.69	4050 / 159.5	43.2 / 95.2

Dimensions of the Verderflex hose are nominal and allow it to be fitted to most brands of hose pumps in the market.

# The Verderflex Range

## The Verderflex High-Pressure Hose Pump Range

- Flows from 2 l/hour (0.2 US Gallons per Hour) to 90m<sup>3</sup>/hour (390 US GPM).
- Discharge pressures up to 16 bar or 230 PSI.
- Pumps can be supplied in either close coupled or long coupled (bare shaft) styles.
- System connections include DIN PN16, ANSI 150lb and JIS.
- Can be supplied with accessories including pulsation dampers, dosing controllers, even as complete dosing stations.



## Verderflex Smart Tube Pump

- Flows from 0.01ml/min (0.0002 US GPH) to 15.5 l/min (161.7 US GPH)
- Maximum discharge pressures up to 4 bar (60 PSI)
- Four sizes of IP 55 protected digitally controlled programmable multi channel tube pumps
- Wide range of tube materials including Verderprene, Platinum Cured Silicon and StaPure®
- Easy-fit self adjusting tube saddle with intergral Saddle Status Detection (SSD)
- External interfaces : 0-10V, 4-20 mA, RS 232
- Optional leakage detection

StaPure® is a registered trademark of W L Gore



### VERDER Ltd

Whitehouse Street, Hunslet, LEEDS, LS10 1AD • Tel: +44 (0)113 222 0250 • Fax: +44 (0)113 222 0291 • info@verderflex.com

Affiliated companies: A Wien • B Aartselaar • CN Shanghai • CZ Praha • D Haan • F Eragny s/Oise • GB Leeds • H Budapest  
JPN Tokyo • NL Groningen/Vleuten • PL Katowice • RO Bucuresti • SA Kya Sand • SK Bratislava • USA Newtown

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